

ABSTRACT OF THE DISCLOSURE

A method controls a torque of an a. c. motor which does not cause a shortage of torque by using an economical current detection which estimates d- and q-axis currents I_{dc} , I_{qc} from d. c. current IDC flowing through an input d. c. bus line of a power converter. A value of d- and q- axis motor currents I_d , I_q of a rotational coordinate system are estimated from detected input d. c. current IDC flowing through the bus line of the power converter to which power is input from a d. c. power source 21. A output voltages of the power converter 2 are controlled so that the estimated currents I_{dc} , I_{qc} are equal to respective current instruction values I_{d*} , I_{q*} . Errors of motor constants are determined from information on the motor currents and the rotational phase errors by an operation.